PRODUCT DESCRIPTION DOCUMENT

Great Lakes Port Forecasts - Experimental

APPROVED **//SIGNED//** **Date:** **July 14, 2006**

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GREAT LAKES PORT FORECASTS

Part 1 - Mission Connection

1. Product/Service Description:
Enhancements to the AWIPS NDFD and Text Formatter, and to capabilities of communications and display systems, now afford an opportunity for the NWS to create and test forecast service with an increased spatial and temporal resolution to a marine port area.

2. Purpose/Intended Use:
The purpose of the experimental Great Lakes Port Forecast is to provide forecasts of operationally important (potentially critical) weather, wind and wave conditions more specific both in time and space.

3. Audience:
The request for a Great Lakes Port Forecasts originated from the owners and operators of large ships on the Great Lakes. However, the anticipated audience for the Port Forecast is a wide variety of marine operators that includes recreational boaters, harbormasters, and ships of the Lake Carriers Association.

4. Presentation Format:
The Port Forecasts will be made available via two means, the Digital Marine Weather Distribution System (DMAWDS) and the Internet Home Pages of the Great Lakes Weather Forecast Offices (WFOs). Two forecast formats for each port will be issued – a coded port forecast which will be similar to the MAFOR format from WMO code FM-61-IV, and a tabular format. The valid time period for the Port Forecast is 24 hours.

A sample of the MAFOR/Coded Port Forecast is:

MAFOR 2009/
ESCANABA 11600 11710 11810 13820 12810. 210103 250001 210001.
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The interpretation for each of the coded groups above is:

MAFOR 2009/ - The MArine FORcast for the 20rd day of the present month beginning at 0900 UTC

ESCANABA - Forecast location - Escanaba Harbor

11600 - From 0900 UTC to 1200 UTC wind direction from the west at 5 to 10 kts and visibility over 3 nautical miles

11710 - From 1200 UTC to 1500 UTC wind direction from the northwest at 5 to 10 kts and visibility over 3 nm

11810 - From 1500 UTC to 1800 UTC wind direction from the north at 5 to 10 kts and visibility over 3 nm

13820 - From 1800 UTC to 0300 UTC wind direction from the north at 10 to 20 kts and visibility over 3 nm

12810 - From 0300 UTC to 0900 UTC wind direction from the north at 5 to 15 kts And visibility over 3 nm

. - End of weather and wind forecast, and beginning of wave height forecast

210103 - From 0900 UTC to 1200 UTC wave heights 1 to 3 feet

250001 - From 1200 UTC to 0600 UTC wave heights to 1 foot

210001 - From 0600 UTC to 0900 UTC wave heights to 1 foot

Note: The forecasted wave heights are significant wave heights. Some waves may be higher.

A sample of the Tabular Port Forecast for is:

LAKE MICHIGAN-202000-
ESCANABA
45.75N 87.08W
400 AM EDT THU JUL 20 2006

DATE	THU 07/20/06						FRI 07/21/06		
UTC 3HRLY	07	10	13	16	19	22	01	04	07
EDT 3 HRLY	03	06	09	12	15	18	21	00	03
WAVES	2	0	0	0	1	1	1	0	
WIND DIR	W	NW	N	N	N	N	N	N	
WIND SPD	10	10	10	20	20	20	15	15	
CLOUDS	BK	BK	SC	FW	SC	FW	FW	FW	
RAIN SHWERS	C	C							
TSTMS	S	S							

Note: wave heights are in feet.

Wind speeds are in knots.

For Clouds – FW (Few), SC (scattered), BK (Broken), OC (Overcast)

For RAIN SHOWERS and TSTMS - "C" means "Chance" and
"S" means "Slight Chance"

5. Feedback Method:

The initial feedback period will occur from October 3, 2006 to January 31, 2007.

In order to assess this new product/service, users of the experimental Port Forecasts are asked to provide feedback on line at:

http://www.weather.gov/survey/-survey/php?code=CPF

Written comments may be mailed to:

National Weather Service
Mr. Gary Schmeling
7220 NW 101st Terrace
Kansas City, MO 64103-2371

Or:

National Weather Service
Mr. Tom Townsend
7220 NW 101st Terrace
Kansas City, MO 64103-2371

Comments may also be faxed to either Gary or Tom at: 816-891-7810

For more detailed information contact: Mr. Schmeling at 816-268-3143
or Mr. Townsend at 816-268-3149.

Part 2 - Technical

1. Format and Science Basis:
The Great Lakes Port Forecasts will be derived from the National Digital Forecast Database (NDFD) grids using an AWIPS text formatter that will automate the composition and issuance of the product.

Each Great Lakes WFO will disseminate the product over the AWIPS/SBN. The products will also be posted on the home pages of the Great Lakes offices. The spatial resolution of the Port Forecasts can be as small as 2.5 kilometers. Data fields will be wind direction, wind speed, weather, precipitation, wave height, cloud cover and ice coverage.

2. Availability:
The Great Lake Lakes Port Forecasts will be issued four times each day around 0200 UTC...0800 UTC…1400 UTC…and 2000 UTC.

3. Additional Information:
Initially, the Great Lakes Port Forecast will be available for the following sites.

In Central Region:

Lake Superior	**WFO**
Two Harbors	Duluth
Duluth Harbor	Duluth
Presque Isle Harbor	Marquette
Whitefish Point	North Central Lower Michigan (Gaylord)
The Soo Locks	North Central Lower Michigan (Gaylord)
Lake Michigan	
Escanaba Harbor	Marquette
Frankfort	North Central Lower Michigan (Gaylord)
Sturgeon Bay Entrance	Green Bay
Green Bay	Green Bay
Milwaukee Harbor	Milwaukee
Calumet River Entrance	Romeoville/Chicago
Burns Harbor	Romeoville/Chicago
St. Joseph Harbor	Northern Indiana
Grand Haven Harbor	Grand Rapids
Lake Huron	
Calcite Harbor	North Central Lower Michigan (Gaylord)
Alpena Harbor	North Central Lower Michigan (Gaylord)
Port of Saginaw	Detroit
Port Huron	Detroit

Detroit River

Port of Detroit	Detroit

In Eastern Region:

Lake Erie

Toledo Harbor	Cleveland
Cleveland Harbor	Cleveland
Ashtabula Harbor	Cleveland
Buffalo Harbor	Buffalo

Lake Ontario

Rochester Harbor	Buffalo
Oswego Harbor	Buffalo

Access to each of the Great Lakes forecast offices web pages can be made by navigating from the National Weather Service web page: http://www.nws.noaa.gov and from regional web sites.